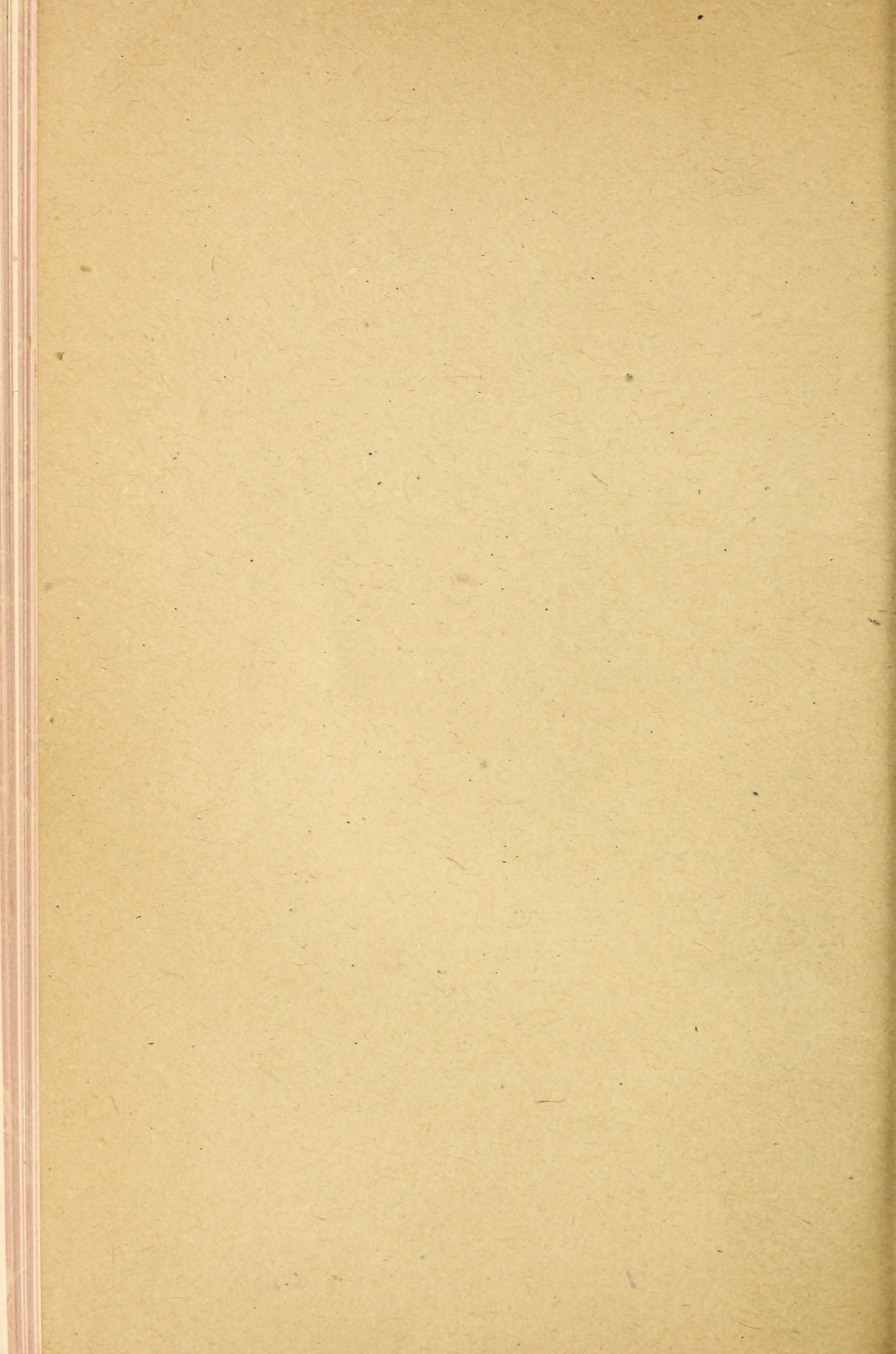


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



UNITED STATES DEPARTMENT OF AGRICULTURE



BULLETIN No. 822

Joint Contribution from the Bureau of Plant Industry
WM. A. TAYLOR, Chief, and the Bureau of Crop
Estimates, L. M. ESTABROOK Chief.



Washington, D. C.



February 25, 1920

PEARS: PRODUCTION ESTIMATES AND IMPORTANT COMMERCIAL DISTRICTS AND VARIETIES.

By H. P. GOULD, *Bureau of Plant Industry*, and FRANK ANDREWS, *Bureau of Crop Estimates*.

CONTENTS.

	Page.		Page.
Relative importance of the pear---	1	Important commercial districts and	
Estimated production of pears-----	1	varieties, by States—Continued.	
Outstanding features of the pear in-		West North-Central States-----	8
dustry-----	4	South Atlantic States-----	9
Important commercial districts and		East South-Central States-----	11
varieties, by States-----	5	West South-Central States-----	11
New England States-----	5	Mountain States-----	13
Middle Atlantic States-----	6	Pacific States-----	14
East North-Central States-----	7	Index of States-----	* 16

RELATIVE IMPORTANCE OF THE PEAR.

Compared with other fruits when the Thirteenth Census was compiled, the pear occupied seventh place in value, being exceeded by the apple, the peach and nectarine (grouped together), the grape, the strawberry, the orange, and the plum and prune (grouped together). It occupied fourth place on the basis of acreage, only the apple, the peach (and nectarine) and the grape exceeding it. The relative importance in acreage and value of different fruits in 1909 is shown graphically in figure 1.

ESTIMATED PRODUCTION OF PEARS.

The estimated production of pears for the years 1909 to 1919, inclusive, is shown in Table I. These estimates include the entire crop, no segregation of the commercial production from the total being made.

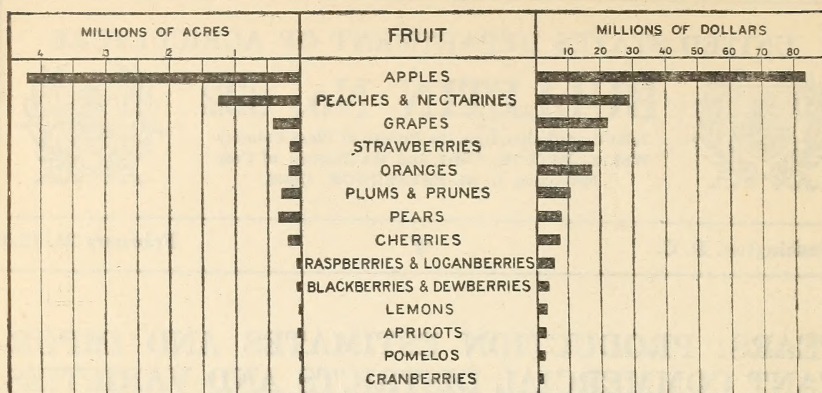


FIG. 1.—Diagram showing the relative importance, acreage, and crop values of the principal fruits of the United States for the year 1909, based on the report of the Thirteenth Census. (From the Yearbook of the Department of Agriculture for 1915.)

TABLE I.—*Estimated production of pears in the United States for the 11-year period from 1909 to 1919, inclusive.*

[Data in bushels, 000 omitted. The figures for 1909 are those of the Thirteenth Census. The figures for other years are interpretations of percentage estimates by the Bureau of Crop Estimates, the census figures being used as the basis.]

Groups and States.	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	^a 1919
North Atlantic States:											
Maine.....	39	35	42	38	32	40	30	36	24	20	44
New Hampshire.....	24	22	24	19	24	22	18	25	19	15	25
Vermont.....	21	23	25	20	20	17	17	24	14	13	18
Massachusetts.....	96	94	114	71	121	98	75	114	71	77	115
Rhode Island.....	12	12	14	11	16	13	10	14	7	10	12
Connecticut.....	41	46	46	32	55	43	36	46	29	34	47
New York.....	1,343	1,530	1,886	1,128	2,016	1,298	1,375	1,675	1,708	1,352	1,530
New Jersey.....	463	910	970	749	598	876	596	687	590	650	500
Pennsylvania.....	379	570	646	418	456	608	494	509	448	518	355
Total.....	2,418	3,242	3,767	2,486	3,338	3,015	2,651	3,130	2,910	2,689	2,646
South Atlantic States:											
Delaware.....	105	301	262	315	77	210	228	164	294	238	140
Maryland.....	368	609	455	616	224	500	483	378	525	455	420
Virginia.....	74	221	122	282	68	234	261	122	194	119	190
West Virginia.....	30	49	49	76	11	72	63	42	33	33	40
North Carolina.....	84	164	52	207	58	187	150	75	150	108	84
South Carolina.....	66	108	52	117	42	109	91	56	100	98	81
Georgia.....	150	260	111	212	118	208	203	135	140	188	152
Florida.....	98	153	88	73	58	112	104	54	46	132	70
Total.....	975	1,865	1,191	1,898	656	1,692	1,583	1,026	1,482	1,371	1,177
East North-Central States:											
Ohio.....	375	360	736	624	400	544	560	376	334	304	218
Indiana.....	320	292	585	448	474	422	410	351	410	260	188
Illinois.....	249	32	499	448	422	422	496	354	456	302	436
Michigan.....	666	456	829	540	707	840	550	1,007	1,080	704	726
Wisconsin.....	13	2	18	13	22	22	23	26			
Total.....	1,623	1,142	2,667	2,073	2,025	2,250	2,039	2,114	2,280	1,570	1,568
West North-Central States:											
Iowa.....	44	1	57	60	102	84	106	63	82	32	58
Missouri.....	143	67	148	332	184	283	294	164	265	112	280
Nebraska.....	7	4	10	15	13	14	18	10	14	6	16
Kansas.....	19	98	70	142	63	109	133	106	140	38	120
Total.....	213	170	285	549	362	490	551	343	501	188	474

^a Subject to revision.

TABLE I.—*Estimated production of pears in the United States, etc.*—Continued.

Groups and States.	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
South-Central States:											
Kentucky.....	252	180	160	336	160	308	264	160	204	140	128
Tennessee.....	84	126	32	196	79	152	195	59	75	112	72
Alabama.....	100	138	48	172	90	132	168	90	80	152	114
Mississippi.....	101	140	40	154	106	142	160	50	30	136	95
Louisiana.....	36	32	24	52	48	52	55	48	52	52	50
Texas.....	111	224	147	296	187	266	301	322	280	246	385
Oklahoma.....	7	28	33	54	23	28	68	11	45	38	70
Arkansas.....	38	46	47	113	55	98	135	68	102	64	98
Total.....	729	914	531	1,373	748	1,178	1,346	808	868	940	1,012
Far Western States:											
Montana.....	8		11	12	10	12	12	6	11	6	11
Colorado.....	133	121	160	193	130	205	99	99	320	194	180
New Mexico.....	29	30	43	52	46	60	64	36	46	56	67
Arizona.....	13	14	16	20	17	20	22	18	21	19	22
Utah.....	39	41	51	52	42	56	31	12	48	51	47
Nevada.....	4	7	2	8	6	7	4	2	6	6	5
Idaho.....	43	62	65	81	71	66	55	50	70	60	70
Washington.....	311	396	372	477	464	536	564	551	595	1,300	1,700
Oregon.....	375	540	441	554	559	540	525	555	600	672	553
California.....	1,928	1,887	1,848	2,015	1,634	1,958	1,650	3,124	3,523	3,871	4,096
Total.....	2,883	3,098	3,009	3,464	2,979	3,461	3,046	4,453	5,240	6,235	6,751
United States (grand total).....	8,841	10,431	11,450	11,843	10,108	12,086	11,216	11,874	13,281	12,993	13,628

The annual variation in the pear crop for the years covered by Table I (1909 to 1917) is shown graphically in figure 2.

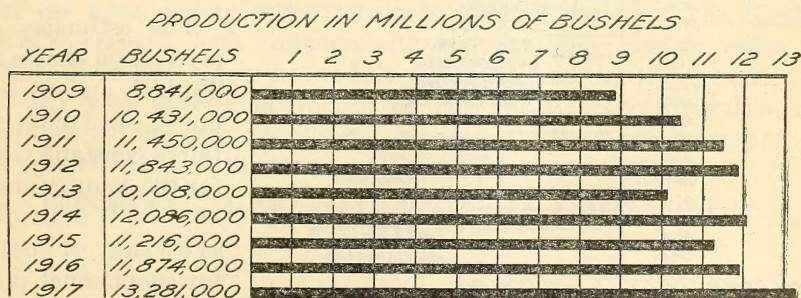


FIG. 2.—Diagram showing the annual farm production of pears (in bushels) in the United States for the 9-year period from 1909 to 1917, inclusive. The estimated farm crop of pears in the United States for 1918 was 10,342,000 bushels; for 1919 (October estimates), 13,687,000 bushels. The estimates of the commercial (in distinction from the farm or agricultural) crop for the past two years are: 1918, 7,589,000 bushels; 1919 (November estimates), 8,422,000 bushels.

Figure 3 shows in a strikingly clear manner the average annual production of pears (in bushels, by States) for the 5-year period, 1912 to 1916, inclusive. As will appear in considering the distribution of the industry, occasional commercial orchards of more or less importance are found in a large proportion of the States, but those in which the industry is of more than local importance are few in number. The commercial industry is located very largely in those States which are shown in figure 3 to have an average annual yield

of 450,000 bushels or more, though in several other States, as, for example, Colorado, Utah, Delaware, Texas, and Illinois, there are places where the pear orchards are of more than local importance.

OUTSTANDING FEATURES OF THE PEAR INDUSTRY.

The census figures for 1890, 1900, and 1910 show (in round numbers) 5,100,000, 17,700,000, and 24,000,000 pear trees of all ages in the country, thus indicating a rather constant and considerable increase

from year to year.

Of the trees recorded in 1910, about 8,800,000 were reported as not of bearing age. No similar segregation of trees of bearing and nonbearing age was made in the census reports of 1890 and 1900.

FAIRLY CONSTANT TOTAL PRODUCTION.

The estimates of production shown in Table I and in figure 2 indicate a fairly constant yield for the country since 1910. While the growing of pears for commercial purposes has been extended in recent years in some localities and the industry

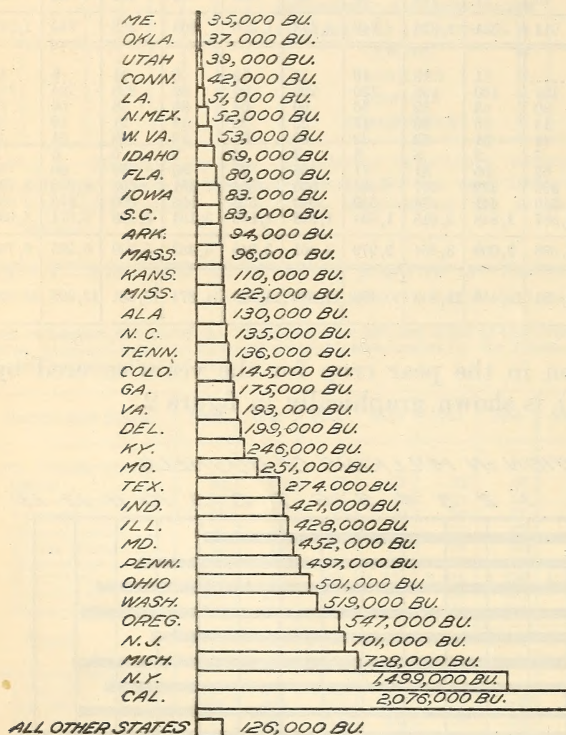


FIG. 3.—Diagram showing the estimated annual average farm production of pears in the principal pear-producing States for the 5-year period from 1912 to 1916, inclusive. The average yearly production for the entire United States for this period was 11,425,000 bushels.

has been newly established in a few regions, it is also true that many orchards planted for commercial purposes have been destroyed during the last two decades. The conclusion, therefore, is that the increases in the number of trees shown by succeeding census reports are made up principally of trees that represent home interests rather than commercial activities.

MENACE OF FIRE-BLIGHT.

To those familiar with the situation, the outstanding feature in pear growing is the menace of fire-blight. This disease, doubtless

more than any other factor, restricts the planting of pears, and in the past it has destroyed great numbers of trees and caused the abandonment of commercial enterprises in many places.

OPPORTUNITY TO EXTEND INDUSTRY NOT GREAT.

Another factor that needs to be considered critically by prospective pear growers is the comparative ease with which the market demand can be supplied. Pears are used in quantity in only a few ways. They are consumed in the fresh state and are canned. In California they are also dried. Otherwise comparatively little use is made of them. The market demand for a fruit that is used in only a very small number of ways is satisfied with a much smaller supply than is the case with a fruit that is used in many different ways. Thus, there is not so large an opportunity in the extension of commercial pear growing as for some other fruits.

PROMINENCE OF THE BARTLETT AND KIEFFER PEARS.

Among pear varieties, the relative prominence of two sorts—the Bartlett and the Kieffer—is conspicuous. These two varieties are to the pear industry of the country what the Elberta variety is to the peach industry, the Washington Navel to the California orange industry, and the Baldwin, Winesap, and Ben Davis varieties to the apple industry. Throughout the northern pear-growing districts, in the Intermountain States and on the Pacific coast, the Bartlett is by far the most widely and extensively planted variety. The Kieffer is also planted, both commercially and for home use, in many of these districts; while in middle latitudes and in the South the Kieffer very largely predominates, because of the comparative resistance of the tree to blight. Further information in regard to the distribution of varieties is given in the pages that follow.

IMPORTANT COMMERCIAL DISTRICTS AND VARIETIES, BY STATES.

NEW ENGLAND STATES.

MAINE.

Distribution.—No important centers of pear production occur in Maine; but occasional orchards of small size are located in several counties in the southern part of the State, including York, Oxford, Cumberland, Androscoggin, Sagadahoc, Kennebec, Lincoln, Knox, Waldo, and possibly in certain localities in the southern sections of the counties to the north of those named.

Varieties.—The varieties commonly planted include the Bartlett, Clapp Favorite, Sheldon, Anjou, Seckel, Bosc, Lawrence, and possibly a few others.

NEW HAMPSHIRE.

Distribution.—Pears in New Hampshire are negligible from a commercial standpoint, and but few are grown for home use. These occur mostly in the southern part of the State.

Varieties.—Bartlett, Sheldon, Howell, Flemish (*Flemish Beauty*), and possibly others are grown.

VERMONT.

Distribution.—Pear growing in Vermont is unimportant commercially, but trees are rather widely distributed, especially in the Lake Champlain district and in Windham County in the southern part of the State.

Varieties.—Bartlett, Clapp Favorite, Howell, Sheldon, Flemish (*Flemish Beauty*), Lawrence, and Winter Nelis are representative sorts in this State.

MASSACHUSETTS.

Distribution.—In an earlier day, eastern Massachusetts was famous for its amateur pear growers. The principal pear interests of the State are still located in that section, especially in the eastern part of Middlesex County in the vicinity of Belmont, Arlington, Concord, and other points not far from Boston. Worcester is also a center of some production.

Varieties.—The principal varieties include the Bartlett, Bosc, Clapp Favorite, Sheldon, Seckel, Danas Hovey, and Anjou.

RHODE ISLAND.

Distribution.—Pears are grown for home and local use, throughout most of Rhode Island, but there are no centers of large production.

Varieties.—Bartlett, Sheldon, and Seckel are the more common sorts.

CONNECTICUT.

Distribution.—There are no communities which are centers of pear production in Connecticut, and the aggregate of the commercial interests is small. There is one large orchard in the extreme southwestern part of the State and small interests in other towns in the same general region, while trees occur in most sections throughout the State.

Varieties.—Bartlett, Anjou, Seckel, and Kieffer are the more common sorts.

MIDDLE ATLANTIC STATES.

NEW YORK.

Distribution.—New York is second only to California in pear production. The commercial interests are located principally in three regions. The largest one is the Lake Ontario district, which includes a large portion of Niagara, Orleans, Monroe, and Oswego Counties, and smaller parts of Cayuga and Onondaga Counties. Pears are also grown in the "finger-lake" region in the central western part of the State and in the Hudson River valley. In the latter, the principal areas are in Columbia and Greene Counties, and smaller interests are found northward in Albany and Rensselaer Counties and

southward in Dutchess and Ulster Counties. Pears are also grown to some extent on Long Island and for home use in many parts of the State.

Varieties.—As in many other States, the Bartlett is the most important variety. Others commonly planted include Clapp Favorite, Bosc, Howell, Angouleme, Anjou, Seckel, Lawrence, and Kieffer. In some orchards in the Hudson River valley, where the soil is sandy, the Bosc has not done well. The conviction prevails that it requires a fairly heavy soil in order to succeed.

NEW JERSEY.

Distribution.—Commercial pear orchards occur in considerable numbers in certain sections of New Jersey, the principal interests centering about Moorestown, Beverly, and Riverton in Burlington County, Merchantville in Camden County, Glassboro in Gloucester County, and at various other points in these and other counties in the central part of the State. Most of the centers of production are within a comparatively short distance of Philadelphia, and a considerable proportion of the fruit is marketed there. In production New Jersey ranks third on a 5-year average (fig. 3).

Varieties.—In many orchards the Kieffer has been largely planted, but varieties of better dessert quality, including the Bartlett, Angouleme (*Duchess*), Seckel, and Lawrence, are also grown commercially. The Sheldon, Vermont Beauty, and Anjou are grown to some extent for home use.

PENNSYLVANIA.

Distribution.—There are no well-developed centers of pear production in Pennsylvania. Pears are grown to a limited extent about Philadelphia, Harrisburg, and some of the other cities of importance, and more or less widely for home use.

Varieties.—The widely grown varieties, such as the Bartlett, Seckel, Lawrence, and Kieffer, are most commonly planted.

EAST NORTH-CENTRAL STATES.

OHIO.

Distribution.—The commercial pear interests in Ohio are small. Some orchards occur in the lake region in Lucas, Ottawa, Cuyahoga, and Lake Counties. Otherwise the pears grown are mostly for home and local use. The aggregate production, however, is considerable (fig. 3).

Varieties.—The Bartlett and Kieffer are the principal sorts.

INDIANA.

Distribution.—Little attention is given to pear growing in Indiana. The industry is restricted practically to rather unimportant home plantings.

Varieties.—Such varieties as the Kieffer, Bartlett, Flemish (*Flemish Beauty*), Tyson, and Sheldon are represented.

ILLINOIS.

Distribution.—Most of the pear orchards in Illinois are located in the southern third of the State, with the principal centers of production in Marion, Clay, and Union Counties.

Varieties.—The Kieffer is the most important variety; a few Garber, Howell, Angouleme (*Duchess*), and possibly other sorts also are grown.

MICHIGAN.

Distribution.—The largest commercial pear interests in Michigan are in the southwestern part of the State, in Berrien, Van Buren, and Allegan Counties; but pears are grown in practically all the counties bordering on Lake Michigan and in Oakland and McComb Counties in the southeastern part of the State. They are grown in nearly all counties for home use.

Varieties.—While the Bartlett leads in importance, a considerable number of varieties are grown in the commercial orchards in Michigan. Among them are the Clapp Favorite, Clairegeau, Howell, Bosc, Danas Hovey, Seckel, Angouleme, Anjou, Kieffer, and several others. The early ripening sorts include Summer Doyenne, Giffard, and Bloodgood.

WISCONSIN.

Practically no pears are grown in Wisconsin.

WEST NORTH-CENTRAL STATES.

MINNESOTA.

Practically no pears are grown in Minnesota.

IOWA.

Distribution.—Pear growing is a negligible factor in the fruit industry of Iowa. This is due largely to the destructiveness of blight, while in the northern part the severity of the winter conditions is also a decidedly limiting factor, few varieties being sufficiently hardy to withstand them.

Varieties.—In Extension Bulletin 27 (revised) of the Iowa State College of Agriculture the La Motte (*Bezi de la Motte*), Warner, Seckel, Anjou, Kieffer, Longworth, and Flemish (*Flemish Beauty*) varieties are reported to have shown a considerable degree of hardiness and resistance to blight in some localities in Iowa.

MISSOURI.

Distribution.—There are no very important centers of pear production in Missouri, but small commercial interests are reported in several counties, including St. Louis, Montgomery, Buchanan, Jackson, Greene, and Howell.

Varieties.—The Kieffer is the principal variety, but the Garber, Angouleme, Seckel, Anjou, and possibly others are grown.

NORTH DAKOTA.

Practically no pears are grown in North Dakota.

SOUTH DAKOTA.

Distribution.—Practically no pears are grown in South Dakota. A few pear trees occur in Union, Clay, Yankton, and Bon Homme Counties, which border on the Missouri River in the southeastern part of the State; they are rarely found elsewhere.

Varieties.—In general, the measure of success with all varieties tried has been so small as to discourage the planting of pears in this State.

NEBRASKA.

Distribution.—A few pear orchards are located in southeastern Nebraska in the counties bordering on the Missouri River as far north as the northern border of Washington County; also in Johnson and Pawnee Counties in the second tier from the river in the extreme southeastern part of the State. Elsewhere in the State pear trees are seldom found.

Varieties.—No variety is preeminent, though the Kieffer probably occurs more frequently than any other. Garber, Bartlett, and Seckel are also grown.

KANSAS.

Distribution.—Small plantings are widely distributed, especially throughout the eastern half of the State of Kansas. The commercial interests are small; but a few orchards are located in the four or five northeasternmost counties of the State north of the Kansas River and in Reno, Sedgwick, Sumner, and Cowley Counties in the Arkansas Valley. A few orchards also occur in the eastern part of the State, in the counties bordering the Kansas River on the south.

Varieties.—Several varieties are included in the plantings, such as the Kieffer, Garber, Clapp Favorite, Angouleme (*Duchess*), Seckel, and Douglas. The last-named variety originated in Kansas in Douglas County.¹

SOUTH ATLANTIC STATES.

DELAWARE.

Distribution.—Pear growing is very generally distributed in Delaware, though considerably more than half the total production is accredited to Kent County. Important areas of production center about Bridgeville, Milford, Camden, Smyrna, and Middletown.

Varieties.—The Kieffer comprises the commercial crop. It is usually considered essential to plant a small proportion of other varieties to insure adequate cross-pollination of the blossoms. The Le Conte and Garber varieties are commonly used for this purpose.

MARYLAND.

Distribution.—A good many orchards of commercial size occur in the Eastern Shore counties, Kent, Queen Annes, and Caroline prob-

¹ See the Yearbook of the Department of Agriculture for 1912, p. 267.

ably leading. Isolated orchards of importance are also found in other localities, including Anne Arundel, Carroll, Washington, and other counties.

Varieties.—The bulk of the fruit consists of the Kieffer, but trees of the Le Conte, Garber, Bartlett, Seckel, Angouleme, Anjou, and a few other varieties are occasionally found.

VIRGINIA.

Distribution.—As in many other States, pear trees are widely distributed, being found in nearly all parts of Virginia, but there are very few commercial orchards and no centralized pear industry. Some car-lot shipments are made from Frederick County.

Varieties.—The Kieffer predominates, but the Garber, Le Conte, Bartlett, Seckel, Sheldon, Lawrence, and some other sorts are sometimes grown.

WEST VIRGINIA.

Distribution.—Very few pears are grown in West Virginia and there are no centers of production.

Varieties.—The Kieffer is found more frequently than any other sort.

NORTH CAROLINA.

Distribution.—The pear is negligible in the fruit industry of North Carolina, though trees are grown more or less in many sections.

Varieties.—The Kieffer is the variety most frequently planted. The Le Conte and Garber varieties are also grown.

SOUTH CAROLINA.

Distribution.—The prevalence of blight has largely restricted the planting of pears, but they are grown in small plantings in most parts of the State.

Varieties.—The sand-pear hybrid group, including the Kieffer, Le Conte, and Garber, comprises practically all the varieties that are planted.

GEORGIA.

Distribution.—Pears are relatively unimportant in Georgia. Orchards and small plantings are located in many parts of the State, and are perhaps of rather greater importance than elsewhere in the southwestern portion, in Grady, Thomas, Brooks, Dougherty, Worth, Crisp, and some other counties. Commercial shipments are made from points in some of these counties.

Varieties.—The Kieffer is the principal variety; some Le Conte, a few Garber, and several others of the sand-pear hybrid group also are grown.

FLORIDA.

Distribution.—In the northern and Panhandle regions of Florida there are some 10 or 12 counties in each of which the pear production, according to the Thirteenth Biennial Report (1913-14) of the

State Department of Agriculture, ranged from about 1,200 to more than 3,200 barrels. Pears are widely distributed in the State, but the interests are too small to be of any special importance. The prevalence of pear blight doubtless has greatly restricted production in this and other Southern States.

Varieties.—The Kieffer and Le Conte comprise most of the plantings.

EAST SOUTH-CENTRAL STATES.

KENTUCKY.

Distribution.—A few pears are grown in Jefferson County and in some other counties along the Ohio River in Kentucky, while small plantings are distributed throughout the State. Even in the aggregate, however, the quantity of fruit grown is small.

Varieties.—The Kieffer and Garber represent practically the total production.

TENNESSEE.

Distribution.—Pears are produced in but very small quantities in Tennessee, though trees are found in small numbers in most sections of the State.

Varieties.—The plantings are confined mostly to the Kieffer, Garber, and Le Conte varieties.

ALABAMA.

Distribution.—Pears are grown here and there throughout the State of Alabama, but not commercially.

Varieties.—The Kieffer is the principal variety. Other varieties of the sand-pear hybrid group, which includes the Le Conte, Garber, and several others, are occasionally planted, especially to provide pollen for fertilizing the Kieffer.

MISSISSIPPI.

Distribution.—Pears are planted more or less widely in the State of Mississippi, but there are no important centers of production. The prevalence of blight doubtless has greatly restricted the growing of this fruit.

Varieties.—The Kieffer and Le Conte are practically the only varieties found.

WEST SOUTH-CENTRAL STATES.

ARKANSAS.

Distribution.—Very few pears are grown in Arkansas. An occasional orchard has been planted in the peach and apple growing sections, and a few fairly large orchards are located in the southern part of the State.

Varieties.—Largely the Kieffer, Le Conte, and Garber, and occasionally other varieties of the sand-pear hybrid group are planted.

LOUISIANA.

Distribution.—Pears are grown in Louisiana for home use only.

Varieties.—Kieffer, Le Conte, Garber, and Koonce are the varieties planted.

OKLAHOMA.

Distribution.—An occasional commercial orchard has been planted in the central and eastern portions of Oklahoma, but there are no centers where pear growing forms an important community interest.

Varieties.—The Kieffer is the principal variety grown commercially, but there are plantings which include the Garber, Bartlett, Angouleme (*Duchess*), and several other sorts of minor importance.

TEXAS.

Distribution.—While pears in considerable quantity are grown in Texas, the producing areas with few exceptions are rather indefinite and correspondingly difficult to define. Probably the most important district for commercial production, potentially at least, is the upper Rio Grande Valley, where, within a distance of 40 miles of El Paso, a great many pear trees have been planted during recent years. Some of the orchards have come into bearing. This district is irrigated from the reservoir made by the Elephant Butte Dam.

Another region in western Texas in which fruit interests, including pear growing on a small scale, are being developed, is located in the general region of Stockton, Pecos County, embracing adjacent parts of four counties, Pecos, Reeves, Jeff Davis, and Brewster. The topography is broken and mountainous, the altitudes of some of the peaks in Jeff Davis County ranging from 5,000 to more than 8,000 feet, though the higher elevations are not included within the fruit-producing area.

In the Panhandle region, pear trees are general; but they represent no important commercial activities.

In the northern portion of the State, extending eastward from the Panhandle region and including an area three to four counties in width, there are grown a good many pears in the aggregate. Some commercial production occurs.

The remaining portions of the State are unimportant from the standpoint of pear production, but trees and an occasional orchard are found widely distributed.

Some years ago many orchards were planted in the Gulf coast region, but most of these proved unsatisfactory because of the prevalence of blight.

Varieties.—In the El Paso district the Bartlett has been largely planted. This, and a few others of the choicer varieties, also the Kieffer, have been planted in the Panhandle region. In other parts of the State, the Kieffer is the principal variety, but the Le Conte, Garber, Smith, and other sorts are also found.

MOUNTAIN STATES.

MONTANA.

Distribution.—There is little or no commercial pear growing in Montana. The climate in the eastern sections of the State is too severe, while blight has been a serious obstacle in maintaining such plantings as have been made in the Bitter Root and other valleys in the western part of the State where fruit-growing interests have been developed.

Varieties.—Such varieties as the Bartlett and Flemish (*Flemish Beauty*) are reported to do well in the western districts, aside from their susceptibility to blight.

IDAHO.

Distribution.—There is a small commercial production of pears in Idaho, principally in the Payette Valley, the Boise Valley, Council Valley, and the Lewiston district. These names signify in general the location of the regions. In limited quantities pears are also grown in most of the other fruit-producing valleys of the State.

Varieties.—The Bartlett variety predominates, but others, including the Flemish (*Flemish Beauty*), Anjou, Winter Nelis, Howell, Clairgeau, and Kieffer, are also planted.

WYOMING.

Distribution.—While there is no pear industry in Wyoming, a very few trees are found in the same districts as the apple. Such apple orchards as have been planted are principally in the valley of the Bighorn River and its tributaries in Bighorn, Washakie, and Hot Springs Counties; in the valley of the Platte River in Natrona, Converse, Platte, and Goshen Counties; and in more or less isolated locations in Crook, Johnson, and Sheridan Counties in the north-eastern part of the State.

Varieties.—Information regarding the adaptability of varieties is obviously meager. The Kieffer and Flemish (*Flemish Beauty*) probably are planted more frequently than any other sorts.

COLORADO.

Distribution.—Pears are grown to a limited extent in most of the irrigated valleys of Colorado where fruit interests have been developed, but the commercial orchards are located chiefly in the Canyon City district in Fremont County and in the Grand Valley in Mesa County.

Varieties.—The most important variety is the Bartlett, but the Anjou, Sheldon, Seckel, Lawrence, Winter Nelis, Kieffer, and some others are grown.

NEW MEXICO.

Distribution.—Though pears are of secondary importance commercially in New Mexico, they are grown more or less in several valleys in which a fruit industry has been developed. The principal

districts in which pears occur are as follows: The Mimbres Valley district, mostly in Luna County; the Rio Grande Valley district, extending from the southern border of the State as far north as the northern part of Santa Fe County; the Otero County district in the northern part of the county of that name; the Lincoln County district, represented by several small valleys converging toward the southeastern part of that county; the Pecos Valley district, which extends through Eddy County and as far north as Roswell in Chaves County; the Portales district in the eastern part of Roosevelt County, a recently developed fruit-growing section; and the San Juan County district, located along the San Juan River in the northern part of the county.

Varieties.—The varieties commonly grown are the Bartlett, Clapp Favorite, Anjou, and Winter Nelis.

ARIZONA.

Distribution.—Pears are grown in Arizona only to a very limited extent, but they occur more or less widely throughout the agricultural sections of the State, and more especially in the Salt River Valley in Maricopa County east of Phoenix and in the Gila Valley in the central part of Graham County.

Varieties.—The principal varieties are the Bartlett, Winter Nelis, and Kieffer.

UTAH.

Distribution.—The pear-producing districts of Utah correspond rather closely with those apple districts which are south of Ogden, blight having destroyed most of the plantings made in previous years in the districts north of that city. The most important pear district, however, centers about Provo, in Utah County. In this district the orchards are located in the Utah Lake Valley along the streams flowing out of the Wasatch Mountains into that lake. In Weber, Davis, and part of Salt Lake Counties orchards are likewise found in the valleys of the small streams which come from the Wasatch Range and which empty into Salt Lake, while south of Salt Lake City orchards occur in the Jordan Valley.

Varieties.—The more important varieties are the Bartlett, Anjou, Winter Nelis, Lawrence, and Flemish (*Flemish Beauty*).

NEVADA.

Practically no pears are grown in Nevada.

PACIFIC STATES.

WASHINGTON.

Distribution.—Pears are of considerable commercial importance in Washington. They are grown principally in the irrigated valleys where apple and other fruit interests have been developed. The largest production is in the Yakima Valley in Yakima and Benton Counties. The Wenatchee Valley, with the interests centering about

the town of Wenatchee, but with some car-lot production at most of the other fruit-shipping stations, is second in importance. Small commercial interests have been developed in the Walla Walla district, in the Okanogan Valley, in the Puget Sound region at various points, and in certain localities in Clarke and Klickitat Counties.

Varieties.—The Bartlett is the variety most extensively grown. Other commercial sorts include the Clapp Favorite, White Doyenne, Flemish (*Flemish Beauty*), Bosc, Clairgeau, Comice, Seckel, Anjou, and Winter Nelis.

OREGON.

Distribution.—Pears are of commercial importance in practically all the fruit-growing districts of Oregon. The most important district, with several thousand acres devoted to this fruit, is in the Rogue River valley, centering about Medford in Jackson County. Several centers of much smaller production are located in the Willamette Valley, in Douglas, Polk, and Marion Counties, and elsewhere; in the Hood River valley; in the Milton-Freewater district; and in the Grande Ronde Valley in the northeastern part of the State.

VARIETIES.—In the Rogue River valley several varieties enter into the industry, the Bartlett, Howell, Clairgeau, Bosc, Comice, Anjou, and Winter Nelis being the most important. Several of these varieties, especially the Bartlett, Anjou, and Winter Nelis, are also grown in most of the other districts. The Clapp Favorite, Flemish (*Flemish Beauty*), and Kieffer occur in some of the orchards in the northeastern sections of the State. A number of other sorts are planted on a scale sufficient to suggest a wide range of adaptability of most of the commercial varieties commonly listed by nurserymen.

CALIFORNIA.

Distribution.—While pears are widely grown throughout most parts of California, the commercial industry is more or less centralized. As reported by the California State Commission of Horticulture (Monthly Bulletin, vol. 5, No. 3, 1916), the counties named in Table II, with acreages in pears indicated, lead in importance.

TABLE II.—Leading pear-producing counties in California, showing acreages in bearing and nonbearing pear trees in 1915.

County.	Area in pear orchards (acres).		County.	Area in pear orchards (acres).	
	Bearing age.	Non-bearing age.		Bearing age.	Non-bearing age.
Lake.....	1,460	1,000	Solano.....	1,000	230
Placer.....	1,500		Sonoma.....	1,097	554
Sacramento.....	3,000	2,000	Los Angeles.....	311	2,383
Santa Clara.....	1,400	185	San Luis Obispo.....	75	3,285

While the last two counties named in Table II are unimportant from the standpoint of present production, the acreages of trees of nonbearing age in those counties are larger than in any others in the State. Several other counties having a relatively small production at present contain from 900 to 1,500 acres of trees not of bearing age. A large total-acreage, however, may be made up of a great number of small noncommercial plantings, while a few hundred acres made up of several comparatively large plantings may make a community interest of considerable commercial significance.

Varieties.—The Bartlett variety so largely predominates in nearly all sections of California, both for shipping fresh and for drying, that it may be said practically to constitute the pear industry of the State. It is also the principal variety used for canning. In some sections the Angouleme, Clairgeau, Comice, Easter, P. Barry, Winter Nelis, and a few others are grown.

INDEX OF STATES.

	Page.		Page.
Alabama.....	11	Nebraska.....	9
Arizona.....	14	Nevada.....	14
Arkansas.....	11	New Hampshire.....	5
California.....	15	New Jersey.....	7
Colorado.....	13	New Mexico.....	13
Connecticut.....	6	New York.....	6
Delaware.....	9	North Carolina.....	10
Florida.....	10	North Dakota.....	8
Georgia.....	10	Ohio.....	7
Idaho.....	13	Oklahoma.....	12
Illinois.....	8	Oregon.....	15
Indiana.....	7	Pennsylvania.....	7
Iowa.....	8	Rhode Island.....	6
Kansas.....	9	South Carolina.....	10
Kentucky.....	11	South Dakota.....	9
Louisiana.....	12	Tennessee.....	11
Maine.....	5	Texas.....	12
Maryland.....	9	Utah.....	14
Massachusetts.....	6	Vermont.....	6
Michigan.....	8	Virginia.....	10
Minnesota.....	8	Washington.....	14
Mississippi.....	11	West Virginia.....	10
Missouri.....	8	Wisconsin.....	8
Montana.....	13	Wyoming.....	13

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.

AT
5 CENTS PER COPY